Stifling the Wind: California Environmental Quality Act and Local Permitting

Brian Troxler*

INTRODUCTION

At the turn of the millennium, California led the nation in installed wind energy capacity.[1] California had over 1600 megawatts ("MW") of capacity,[2] representing a majority of the nation's 2472 MW. The second most developed state had only had seventeen percent of California's capacity.[3] However, since 2000, wind capacity in the United States has

* J.D. Candidate 2013, Columbia Law School. The author would like to thank Professor Michael Gerrard and the staff and editors of the *Columbia Journal of Environmental Law* for their comments and editorial work.

1. Nat'l Renewable Energy Lab., *Installed Wind Capacity*, U.S. DEP'T ENERGY, http://www.windpoweringamerica.gov/wind_installed_capacity.asp (last visited Oct. 18, 2012).

2. *Id.* MegaWatts ("MW") measure the power capacity of generators.

3. *Id.*

increased twentyfold to almost 50,000 MW,[4] while capacity in California has less than tripled.[5]

Although many factors contribute to differing rates wind energy development across the United States, California's decentralized siting and arduous environmental evaluation requirements should bare blame. Though California still maintains the third most installed wind energy capacity,[6] despite ranking nineteenth in terms of total wind generating potential,[7] it still has 34,000 MW of uptapped on-shore economic wind potential.[8] In-state wind resources have the potential to meet 39.4% of the State's current energy needs but currently only provide 3.3%.[9] Focusing on California's relative wind potential understates California's ability to develop practically viable wind resources in the near future. Moreover, attributing California's repressed growth solely to its relative amount of wind resources oversimplifies the issue and ignores the possibility that California's regulatory regime and its implementation may be less accommodating to wind energy development than regimes in other states.

California allows local governments to site commercial wind projects, delegating this technical and complicated task to planning committees that are often not specialized.[10] The California Environmental Quality Act ("CEQA")[11] further complicates this process. Under CEQA, the local government must analyze the environmental impacts of proposed projects and consider those impacts in deciding whether to issue a

4. *Id*.

5. *Id.* These numbers are derived by comparing the "1999 Year End Wind Power Capacity (MW)" map and the "Current Installed Wind Power Capacity (MW)" map. *Id.*

6. U.S. DEP'T OF ENERGY, 2011 WIND TECHNOLOGIES MARKET REPORT 7–8 (2012), *available at* http://www1.eere.energy.gov/wind/pdfs/2011_wind_technologies_market_report.pdf.

7. AM. WIND ENERGY ASS'N, WIND ENERGY FACTS: CALIFORNIA 1 (2011), *available at* http://www.awea.org/learnabout/publications/upload/California.pdf. But, note that a comparison of states' potential capacities is misleading, since the practical viability of such capacities depends on other factors, including proximity to markets. *See Transmission & Grid Integration*, AM. WIND ENERGY ASS'N, http://www.awea.org/issues/transmission/index.cfm (last visited Oct. 18, 2012) (explaining that grid transmission to customers is one of the biggest constraints on wind energy's growth in the United States).

8. CAL. ENERGY COMM'N, CEC-150-2011-002, RENEWABLE ENERGY IN CALIFORNIA: ISSUES AND STATUS C-8 (2011), *available at* http://www.energy.ca.gov/2011publications/CEC-150-2011-002/CEC-150-2011-002-LCF-REV1.pdf (discussing California's technical wind potential, which takes into "account resource availability, geographical restrictions, and technical limitations like energy conversion efficiencies").

9. AM. WIND ENERGY ASS'N, WIND ENERGY FACTS: CALIFORNIA, *supra* note 7, at 1.

10. *See infra* Part II.

11. Brent Stall et al., *Wind Energy Laws and Incentives: A Survey of Selected State Rules,* 49 WASHBURN L.J. 99, 99 (2009) (mentioning that wind turbines in California, unlike in Texas or Iowa, are subject to the complex regulatory requirements of CEQA).

permit.[12] The combination of decentralized siting and stringent environmental evaluation shrouds the cost, outcome, and timeline of the permitting process in uncertainty, chilling investment in new capacity.[13]

However, environmental evaluation procedures should clearly not be discarded. Wind projects may damage wildlife habitats or kill birds and bats, especially when poorly sited.[14] Towering wind turbines dominate rural landscapes, sometimes disrupting aesthetically important sites or causing noise pollution.[15] Despite these potential impacts, wind energy benefits the environment substantially by reducing pollutant emissions and water consumption.[16] Thus, the challenge is to site wind projects efficiently in less environmentally sensitive areas. The California state government should take a significant step towards this goal by exercising its authority to site wind energy projects and by conducting environmental review of those projects in a uniform, timely, and predictable manner.

Part I of this Note discusses the process of developing a wind project, highlighting the timing of investments and financing. Part II discusses siting in California, and Part III describes CEQA's requirements. Part IV follows by discussing the effect of CEQA and local permitting on the wind industry. Finally, Part V offers suggestions by which the California state government can alleviate these adverse effects.

I. THE PROCESS OF DEVELOPING A WIND FARM

Developing a commercial wind farm is an intricate and complex process, which depends on the cooperation of developers; landowners; utilities; and local, state, and sometimes federal agencies.[17] Initially, the developer must locate a potentially suitable site and a market able to

12. *See infra* Part IV.D.

13. *See infra* Part IV.D.

14. Charles Burress, *The Deadly Toll of Wind Power,* S.F. CHRON., Jan. 2, 2008, at A1, *available at* http://www.sfgate.com/bayarea/article/THE-DEADLY-TOLL-OF-WIND-POWER-3299197.php.

15. Ronald H. Rosenberg, *Making Renewable Energy A Reality—Finding Ways to Site Wind Power Facilities*, 32 WM. & MARY ENVTL. L. & POL'Y REV. 635, 641, 668 (2008) (discussing the social costs of wind turbines).

16. U.S. DEP'T OF ENERGY, 20% WIND ENERGY BY 2030: INCREASING WIND ENERGY CONTRIBUTION TO US ELECTRICAL SUPPLY 107–14 (2008), *available at* http://www.nrel.gov/docs/fy08osti/41869.pdf (discussing the benefits of wind energy, namely reduced carbon emissions, and arguing that climate change poses a greater threat to bird and bat populations).

17. NWCC SITING SUBCOMM., NAT'L WIND COORDINATING COMM., PERMITTING OF WIND ENERGY FACILITIES 8 (2002), *available at* http://www.nationalwind.org/assets/publications/permitting2002.pdf.

absorb the additional supply.[18] The developer then gathers more accurate anemometric data[19] at the site and secures options for long-term leases.[20] After identifying a site and drafting a layout of the project, the developer will begin the permitting process.[21] In California, a local planning agency has the primary permitting responsibility for commercial wind projects but must comply with CEQA in making a determination.[22] The project may also need the permission of other relevant local, state, and federal agencies.[23] Subsequently, the developer must negotiate a transmission interconnection agreement and power purchase agreements while concurrently buying or leasing development rights to the surveyed site.[24] Only after obtaining the site, the necessary permits, access to a market, and purchase agreements can the developer secure outside financing for the project.[25] To emphasize the importance of this critical point, the developer must float the costs of planning and permitting until investors can be successfully solicited. After reaching this stage, projects can be highly leveraged: equity usually contributes between ten and fifty percent of the capital costs, with the rest borrowed from financial institutions.[26] Construction can begin after the developer secures the financing. Most wind farms, depending on the topography and climate, can be operational within a year of breaking ground.[27] The total development timeline, from initial wind assessments through construction, varies widely—ranging from two to five years[28]—with Californian wind projects on the longer side of the scale, largely due to CEQA and decentralized permitting.[29]

18. *Id.* at 10.

19. Anemometric data—measurements of wind speed and direction—is obtained from sensors attached to moveable, 350-foot meteorological towers. *Id.* at 8. Wind farm operators continue to use anemometers, often attached to the turbines, in order to detect sufficient wind speeds for operation. *Id.* at 7–8.

20. *Id.* at 10.

21. *Id.* at 10.

22. *See infra* Part II.

23. *See infra* Part III.

24. NWCC SITING SUBCOMM., *supra* note 17, at 12.

25. *Id.* at 11; Christiane Bohn & Christopher Lant, *Welcoming the Wind? Determinants of Wind Power Development Among U.S. States*, 61 PROF. GEOGRAPHER 87, 93 (2009).

26. *Id.*

27. *Id.* at 12.

28. SUSAN COMBS, TEX. COMPTROLLER OF PUB. ACCOUNTS, THE ENERGY REPORT 163 (2008), *available at* http://www.window.state.tx.us/specialrpt/energy/pdf/96-1266Energy Report.pdf.

29. *See infra* Part IV.

II. PERMITTING IN CALIFORNIA

A. The Legal Landscape

In California, permitting and siting of commercial wind farms remains vested with local governments.[30] California has fifty-eight counties, 482 incorporated cities, and 3400 special districts, each of which is a separate government entity.[31] Forty-five percent of its cities have fewer than 25,000 people, and more than half of its counties are considered predominantly rural.[32] County governments, through their planning and development agencies, conduct most of the permitting for commercial wind energy facilities.[33]

In exercising this authority, local governments should aim to separate incompatible land uses.[34] Jurisdictions have adopted a range of approaches to guide potential wind energy development.[35] Some local governments explicitly delineate where commercial wind turbines may be located.[36] Many jurisdictions fail to address wind turbine siting.[37] This situation is common because zoning ordinances in rural communities—where commercial wind developments are located[38]—are only "designed to cope with rural densities and agricultural or ranching economies," and thus lack complex and extensive zoning codes.[39] Consequently, such local governments lack the proper regulatory framework[40] and are forced to evaluate wind project applications *ad hoc*, leaving developers uninformed about the prospects for approval.[41] In this process, some jurisdictions apply existing zoning regulations, such

30. CAL. ENERGY COMM'N, CEC-700-2007-008-CMF, CALIFORNIA GUIDELINES FOR REDUCING IMPACTS TO BIRDS AND BATS FROM WIND ENERGY DEVELOPMENT 30 (2007), *available at* http://www.energy.ca.gov/2007publications/CEC-700-2007-008/CEC-700-2007-008-CMF .pdf; Melanie McCammon, Note, *Environmental Perspectives on Siting Wind Farms: Is Greater Federal Control Warranted?*, 17 N.Y.U. ENVTL. L.J. 1243, 1263 (2009). In contrast, in Washington any renewable energy facility can apply for a siting application with the Washington Energy Facility Site Evaluation and bypass local government review. *Id.* at 1259.

31. CAL. ENERGY COMM'N, *supra* note 8, at 219.

32. *Id.* at 219.

33. *Id.* at 64.

34. *See* Rosenberg, *supra* note 15, at 678 (discussing land use planning generally).

35. Hannah Wiseman et al., *Formulating A Law of Sustainable Energy: The Renewables Component*, 28 PACE ENVTL. L. REV. 827, 871–72 (2011).

36. CAL. ENERGY COMM'N, *supra* note 8, at 220; Wiseman et al., *supra* note 35, at 873.

37. CAL. ENERGY COMM'N, *supra* note 8, at 220.

38. ENERGY EFFICIENCY & RENEWABLE ENERGY, U.S. DEP'T OF ENERGY, WIND ENERGY *FOR* RURAL ECONOMIC DEVELOPMENT 3 (2004), *available at* http://www.nrel.gov/docs/fy04osti/ 33590.pdf.

39. Rosenberg, *supra* note 15, at 674.

40. CAL. ENERGY COMM'N, *supra* note 8, at 220.

41. Wiseman et al., *supra* note 35, at 872–73.

as height limitations, to wind turbines.[42] Others require developers to obtain a special use permit or a variance in order for the project to proceed.[43] In some instances, developers, on their own or at the urging of the local government, have initiated and participated in the legislative process to rezone the area.[44]

Jurisdictions can alleviate much of this uncertainty by specifically delineating where turbines may be sited.[45] Zoning codes can provide potential developers "with up-front knowledge of potential legal sites."[46] Not coincidentally, wind energy development in California is concentrated in areas where the zoning codes explicitly allow development.[47] California's commercial wind projects are clustered in Altamont Pass in Alameda County, San Georgina Pass in Riverside County, the Tehachapi Mountains in Kern County, and Solano County,[48] because these jurisdictions have explicitly zoned for wind energy development. Zoning ordinances also define specifications for development such as the minimum setback from property lines and other structures.[49] Although these regulations may be restrictive, at least prospective developers have some guidance for shaping their proposals.[50]

Proposed commercial wind projects in all Californian jurisdictions, even those that address siting in their zoning codes,[51] must receive

42. *Id*. at 874.

43. *Id.*

44. CAL. ENERGY COMM'N, *supra* note 8, at 64; Wiseman et al., *supra* note 35, at 874; *see also* NAT'L WIND COORDINATING COMM., WIND POWER FACILITY SITING CASE STUDIES: COMMUNITY RESPONSE 17 (2005), *available at* http://www.nationalwind.org/assets/publications/NWCC_Siting_Case_Studies_Final.pdf.

45. *See* Wiseman et al., *supra* note 35, at 873.

46. *Id.*

47. DORA YEN-NAKAFUJI, CAL. ENERGY COMM'N, CEC-500-2005-071, CALIFORNIA WIND RESOURCES 3 (2005), *available at* http://www.energy.ca.gov/2005publications/CEC-500-2005-071/CEC-500-2005-071-D.PDF (noting the concentration of wind energy generation capacity and output at Altamont Pass, San Georgina Pass, the Tehachapi Mountains, and Solano County).

48. *Id.*

49. *See, e.g.*, SCOTT LARWOOD & C.P. VAN DAM, CAL. WIND ENERGY COLLABORATIVE, CEC-500-2005-184, PERMITTING SETBACK REQUIREMENTS FOR WIND TURBINES IN CALIFORNIA 11–12 (2006), *available at* http://www.energy.ca.gov/2005publications/CEC-500-2005-184/CEC-500-2005-184.PDF.

50. Wiseman et al., *supra note* 35, at 874–75 ("[D]evelopers' use rights will be relatively clear depending on the specificity of the code. A code that describes the zones in which utility-scale renewables are permitted, their allowed height, the acceptable decibel level for wind turbines, and the required setbacks for renewables in various zones will allow a developer to proceed with a project relatively quickly once she has obtained the necessary use rights through a lease or easement.").

51. *See, e.g.*, ALAMEDA COUNTY, CAL., CODE OF ORDINANCES, § 17.06.040(N) (2012) (enacted 2010) (allowing commercial wind developments only in "large parcel agricultural" zones but even then only after obtaining a conditional use permit from the County Board of Supervisors); KERN

approval by the local government.[52] The developer, recognizing that it is at the mercy of the permitting agency (termed the "lead agency"), often meets with this agency before filing a permit application to discuss the project, the permitting process, and possible issues.[53] The developer may also meet with nearby landowners, environmental groups, and other interest groups in order to hear and assuage their concerns.[54]

After these preliminary discussions, the developer files the permit application. The lead agency, although afforded some discretion in the process of evaluating the proposed project, must comply with the California Environmental Quality Protection Act,[55] which imposes procedural and quasi-substantive requirements.[56] Under CEQA, the lead agency must conduct an extensive environmental evaluation and hold public hearings.[57] Against the background of this record, the lead agency not only determines whether or not to allow the proposed wind farm but also the necessity of mitigation measures and other construction, operation, and decommissioning requirements.[58] Finally, the project must be approved by trustee agencies[59] and other responsible agencies, which administer other local, state, and federal laws.[60] In other words, the local government is the final siting arbiter, subject to permission and

COUNTY, CAL., CODE OF ORDINANCES § 19.64.030 (2012) (enacted 1997) (requiring all commercial wind projects to obtain a conditional use permit); RIVERSIDE COUNTY, CAL., ZONING CODE, art. XVII, § 17.2(d) (2009) (allowing commercial wind turbines in the Wind Energy Resource Zone but only upon obtaining a Wind Energy Conversion System Permit); SOLANO COUNTY, CAL., ZONING REGULATIONS ch. 28, art. II, § 28-50.5 (2012) (requiring a discretionary use permit for commercial wind projects).

52. Typically, permitting by the local government requires CEQA analysis and review. CAL. ENERGY COMM'N, *supra* note 8, at 64. However presumably if a locality's zoning codes were amended to automatically allow commercial wind developments without requiring a discretionary permit in certain areas, then CEQA would not be applicable to the individual projects. However, no jurisdiction to date has adopted such an approach and CEQA would still apply to the zoning ordinance amendment. CAL. PUB. RES. CODE § 21080(a) (West 2007).

53. NWCC SITING SUBCOMM., *supra* note 17, at 15.

54. *Id.* at 14.

55. Because permitting is a discretionary governmental action, it is subject to CEQA. *See infra* Part III.

56. *See infra* Part III.

57. *See infra* Part III.

58. NWCC SITING SUBCOMM., *supra* note 17, at 14.

59. A trustee agency has jurisdiction over natural resources effected by a project held in trust. CAL. CODE REGS. tit. 14, § 15386 (2013).

60. "Responsible agencies" have discretionary approval power over the project. *Id.* § 15381. The lead agency, in this case the local permitting authority, has responsibility for complying with CEQA. The responsible agencies, "can refuse to approve a project in order to avoid direct or indirect environmental effects of that part of the project which the [r]esponsible [a]gency would be called on to carry out or approve." *Id.* § 15042. For example, the regional water control board would lack the authority to disapprove a wind project for its effects on wildlife unrelated to water quality. *Id.*

permit issuance of the other relevant government authorities (trustee and responsible agencies). As such, permitting in California is hardly a "one-stop shop" for developers. Rather, developers must get the approval of many local, state, and federal agencies. For example, the EIR of a 750 MW wind farm identified eight local, four state, and three federal agencies from which the project had to obtain approval.[61] These trustee and responsible agencies have as long as 180 days after the lead agency approves the project to make a determination.[62] Demonstrating the inefficiency of this decentralized process, permitting in California extends for an average of four years,[63] whereas in most areas of the country, it can be accomplished in a year.[64]

B. Criticism of Local Siting

Permitting for commercial wind projects is ill-suited for local control.[65] This process should involve assessing and balancing many economic, environmental, and safety concerns.[66] Local governments often lack the capacity to adequately evaluate these criteria.[67] Many local governments are constrained by "scaled back staffing as a result of the economic downturn, limited expertise about renewable technologies, and lack of energy elements in their general plans," which can result in

61. KERN CNTY. PLANNING & CMTY. DEV. DEP'T, DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT: ALTA INFILL II WIND ENERGY PROJECT 2-10 (2011), *available at* http://www.co.kern.ca.us/planning/pdfs/eirs/alta_wind_infill/ (EIR materials available by chapter). The project required approval from the following local agencies: Kern County Water Agency; Eastern Kern Air Pollution Control District; Kern County Fire Department; Kern County Board of Supervisors; Kern County Planning Commission; Kern County Department of Engineering, Survey and Permit Services; Kern County Environmental Health Services Department; and, Kern County Roads Department. *Id.* The project required approval from the following state agencies: California Department of Fish and Game; Regional Water Quality Control Board—Lahontan Region; California Department of Transportation; and, California Air Resources Board. *Id.* Finally, at the federal level, the project required approval from the U.S. Department of Interior, the Federal Aviation Administration, and the U.S. Fish and Wildlife Service. *Id.* The Kern County Planning Department served as the lead agency. *Id.*

62. CAL. GOV'T CODE § 65952(a) (West 2009).

63. CTRS. OF EXCELLENCE, ENVIRONMENTAL SCAN: WIND TURBINES TECHNICIANS IN CALIFORNIA 11 (2009), *available at* http://www.coeccc.net/environmental_scans/wind_scan_sw_09.pdf.

64. NWCC SITING SUBCOMM., *supra* note 17, at 10.

65. Rosenberg, *supra* note 15, at 684 n.219 (2008) ("A too favorable locality could approve a large wind farm siting request that would fill local government tax coffers and increase farm rental income while at the same time damage significant state scenic or natural resource interests. On the other hand, a too unfavorable locality could reject similar proposals for vague, uncomfortable reasons while not considering statewide interests such as RPSs or other policies.").

66. Gregory D. Eriksen, *Breaking Wind, Fixing Wind: Facilitating Wind Energy Development in New York State,* 60 SYRACUSE L. REV. 189, 201 (2009).

67. CAL. ENERGY COMM'N, *supra* note 8, at 17.

permit processing delays.[68] As such, local siting can result in "truly provincial decisions that ignore statewide concerns."[69] Alternatively, unreasoned or biased decisions can cause discord between a local government and its constituency.[70] A centralized state agency would not be as susceptible to these influences and would thus be better able to make reasoned decisions.[71] Moreover, because prospective developers do not have a "one-stop shop" for governmental approval, instead facing the high transaction costs of navigating through a regulatory maze, wind resources are less likely to be developed.[72]

III. CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act regulates government actions and permitting decisions, with the purpose of incorporating environmental protection, public disclosure, and public participation into informed decision making.[73] Modeled on its federal counterpart, the National Environmental Protection Act ("NEPA"), CEQA essentially requires state and local agencies to consider the environmental effects of their actions.[74]

CEQA applies to a broad range of projects, including both public projects and discretionary approval of private projects.[75] In other words, if a project requires government approval, even if only from a local government, it is subject to CEQA.[76] Since developers must obtain discretionary approval from the local government in all Californian

68. *Id.*

69. Rosenberg, *supra* note 15, at 684 n.219.

70. Alexa Burt Engelman, *Against the Wind: Conflict over Wind Energy Siting*, 41 ENVTL. L. REP. 10,549, 10,561 (2011).

71. *Id.*

72. Wiseman et al., *supra* note 35, at 510 (explaining that renewable projects subject to conflicting regulations from different jurisdictions or agencies face higher transaction costs, and results in "too little renewable development").

73. CAL. CODE REGS. tit. 14, § 15002 (2013); John Watts, *Reconciling Environmental Protection with the Need for Certainty: Significance Thresholds for CEQA*, 22 ECOLOGY L.Q. 213, 222 (1995).

74. Watts, *supra* note 73, at 222.

75. CAL. PUB. RES. CODE § 21080(a) (West 2007); Mammoth v. Bd. of Supervisors, 502 P.2d 1049, 1056 (Cal. 1972) (holding that CEQA applies not only to public projects and publicly funded projects, but also to discretionary approval of private projects).

76. CAL. PUB. RES. CODE § 21080(a), (b)(1). In comparison, NEPA only applies to federal agencies. National Environmental Policy Act of 1969 § 102(2)(D), 42 U.S.C. § 4332(2)(D) (2006); Major Federal Action, 40 C.F.R. § 1508.18 (2013); Stephen M. Johnson, *Nepa and Sepa's in the Quest for Environmental Justice*, 30 LOY. L.A. L. REV. 565, 594–95 n.126 (1997).

jurisdictions, all commercial wind energy projects proposed in California are subject to CEQA.[77]

CEQA assesses proposed projects through a two-step review process.[78] First, the lead reviewing agency conducts an initial study to determine whether "there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment."[79] If there is no potential for significant adverse environmental effects, no further review is required.[80] Otherwise, additional and extensive evaluation, in an EIR, may be required.

Even if there are potential significant effects, the permitting agency and the project developers can agree to a "mitigated negative declaration," obviating the need for further review.[81] A mitigated negative declaration represents a compromise, in which the developer agrees to alter plans so as to "avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur."[82] The permitting agency has significant leverage during the mitigated negative declaration stage because the project developer has considerable incentives—namely, avoiding the otherwise required EIR—to agree to the conditions.[83] Compared to an EIR, a mitigated negative declaration is less expensive, alleviates uncertainty, and perhaps most importantly, avoids the extended delay of further review.[84] Due to these

77. *See* discussion *supra* Part II (indicating that even under the most permissive of California's zoning codes, proposed wind projects must obtain a conditional use permit).

78. The CEQA process mirrors its federal counterpart NEPA. *See National Environmental Policy Act (NEPA)*, ENVTL. PROTECTION AGENCY, http://www.epa.gov/compliance/basics/nepa.html (last updated June 25, 2012) (providing an overview of NEPA).

79. CAL. CODE REGS. tit. 14, § 15063(b)(1) (2013); CAL. PUB. RES. CODE § 21080(c) (West 2007) ("If a lead agency determines that a proposed project, not otherwise exempt from this division, would not have a significant effect on the environment, the lead agency shall adopt a negative declaration to that effect. The negative declaration shall be prepared for the proposed project in either of the following circumstances: (1) There is no substantial evidence, in light of the whole record before the lead agency, that the project may have a significant effect on the environment. (2) An initial study identifies potentially significant effects on the environment, but (A) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (B) there is no substantial evidence, in light of the whole record before the lead agency, that the project, as revised, may have a significant effect on the environment.").

80. CAL. PUB. RES. CODE § 21080(c)(1) (West 2007). "'Significant effect on the environment' means a substantial, or potentially substantial, adverse change in the environment." *Id.* § 21068.

81. CAL. CODE REGS. tit. 14, § 15070(b) (2013).

82. *Id.* § 15070(b)(1).

83. Watts, *supra* note 73, at 229.

84. *Id.* at 228. A mitigated negative declaration fast tracks the environmental review process, and the lead agency must adopt a mitigated negative declaration within 180 days after the completion of the application. CAL. PUB. RES. CODE § 21100.2(a)(1)(B) (West 2007).

cost and time considerations, project developers often prefer to mitigate the potential environmental impacts rather than subject the project to the EIR process. Indicative of this preference, mitigated negative declarations account for almost half of CEQA determinations,[85] and EIRs are only conducted for four to six percent of projects.[86]

Despite the infrequency with which a project is actually required to prepare an EIR, the trigger for such a determination is quite expansive. CEQA requires that "[i]f there is substantial evidence, in light of the whole record before the lead agency, that the project *may* have a significant effect on the environment, then an [E]nvironmental [I]mpact [R]eport shall be prepared."[87]

An EIR is essentially "an environmental 'alarm bell,' designed to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[88] As such, it must clearly identify and describe the potentially significant direct and indirect environmental effects, giving due consideration to both short-term and long-term impacts.[89] A commercial wind project may significantly affect local bird and bat populations, noise levels, air quality, aesthetics of the surrounding area, agricultural resources, water supply, transportation systems, and cultural resources.[90] These impacts are considered in the EIR.[91] Significantly, the EIR must discuss possible mitigation measures for adverse environmental impacts.[92]

Rather than evaluate the project in the abstract, the EIR also considers "a range of reasonable alternatives to the project."[93] Specifically, California regulations require that the review assess alternatives "which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the

85. Watts, *supra* note 73, at 227.

86. *Id*. A determination of no significant effect comprised the rest of the decisions. The study was not limited to wind energy projects but rather included all projects and decisions subject to CEQA. *Id.*

87. CAL. PUB. RES. CODE § 21080(d) (West 2007) (emphasis added).

88. Laurel Heights Improvement Ass'n v. Regents of Cal., 47 Cal. 3d 376, 392 (Cal. 1988) (quoting Cnty. of Inyo v. Yorty, 32 Cal. App. 3d 795, 810 (Cal. Ct. App. 1973)).

89. CAL. PUB. RES. CODE § 21100(b)(1) (West 2007); CAL. CODE REGS. tit. 14, § 15126.2(a) (2013).

90. CAL. ENERGY COMM'N, *supra* note 8, at 55–61.

91. *Id.*; s*ee, e.g.*, KERN CNTY. PLANNING & CMTY. DEV. DEP'T, *supra* note 59, at 2–8 (providing a California EIR assessing resources; *see also* KERN CNTY. PLANNING & CMTY. DEV. AGENCY, LOWER WEST WIND ENERGY PROJECT FINAL EIR ch.4 (2012), *available at* http://pcd.kerndsa.com/planning/environmental-documents/211-lower-west-wind-energy-project.

92. CAL. PUB. RES. CODE § 21100(b)(3) (West 2007).

93. CAL. CODE REGS. tit. 14, § 15126.6(a) (2013).

project, and evaluate the comparative merits of the alternatives."[94] The review must consider alternatives even if they "would impede to some degree the attainment of the project objectives, or would be more costly."[95] The review takes several factors into account when considering the feasibility of alternatives, including "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations . . . ."[96] The analysis must also consider "whether the proponent can reasonably acquire, control or otherwise have access to the alternative site . . . ."[97]

Finally, the EIR evaluates the environmental effect of denying the permit.[98] Specifically, the EIR must consider "what would be reasonably expected to occur in the foreseeable future if the project were not approved . . . ."[99] The regulations elaborate: "[if] disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed."[100] As such, because continued reliance on fossil fuels would seem to be a "sufficiently predictable consequence" of denying a permit to wind energy facilities, the no project analysis offers a forum to evaluate wind projects' reduction of greenhouse gas emissions and water consumption as well as other toxic byproducts of fossil fuel combustion.[101] However, wide discretion is afforded to the lead agency in scoping the discussion of alternatives and effects of denying approval,[102] and at least one commercial wind project's EIR did not consider the possibility of greater emissions as a result of the project's cancellation.[103] The responsibility for preparing the EIR falls on the lead agency, but the actual preparation of the report can be contracted out to

94. *Id.*

95. *Id.* § 15126.6(b).

96. *Id.* § 15126.6(f)(1).

97. *Id.*

98. *Id.* § 15126.6(e)(1).

99. *Id.* § 15126.6(e)(2).

100. *Id.* § 15126.6(e)(3)(B).

101. *See, e.g.*, KERN CNTY., JAWBONE WIND ENERGY PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT 1–14 (2011), *available at* http://www.co.kern.ca.us/planning/pdfs/eirs/northsky_jawbone/DEIR/Subsections/1.6.pdf (considering a reduction in carbon emissions).

102. CAL. CODE REGS. tit. 14, § 15126.6(a), (f) (2013); Citizens of Goleta Valley v. Bd. of Supervisors, 52 Cal. 3d 553, 576 (Cal. 1990) ("[T]here is no ironclad rule governing the nature or scope of the alternatives to be discussed . . . other than the rule of reason."); Laurel Heights Improvement Ass'n, 47 Cal. 3d at 400–03.

103. *See* KERN CNTY. PLANNING & CMTY. DEV. DEP'T, *supra* note 61, at 6-6.

an independent contractor.[104] Either way, the developer may be required to cover the associated expenses.[105]

Drafting this lengthy and comprehensive document is just one step in a long process. Upon completing the draft, the lead agency must circulate the draft to the general public for comment.[106] The lead agency must consider and respond to the public's comments as part of the final EIR.[107] If the final EIR incorporates significant new information, the final EIR must be circulated again for further agency and public review.[108]

Consequently, complying with CEQA can be a painstaking process, involving significant analysis of not only the actual impacts of the proposed project, but also its cumulative and growth-inducing impacts. However, the agency's obligations under CEQA do not end with mere consideration of the environmental impacts. Unlike NEPA, which only sets procedural requirements,[109] CEQA governs the lead agency's decision making, prohibiting approval of projects with significant environmental impacts[110] unless the agency finds that specific economic, legal, social, or technological considerations make the mitigation measures or alternatives infeasible and those considerations outweigh the environmental effects.[111] Thus, a determination that an effect is significant forces the lead agency to either mandate offsetting mitigation measures, or publicly elevate other considerations above the environmental concerns in a "statement of overriding consideration."[112] Due to this quasi-substantive provision, CEQA, as compared to NEPA, places greater emphasis on mitigating adverse environmental impacts.[113]

104. CAL. PUB. RES. CODE § 21082.1(a) (West 2007).

105. *Id.* § 21089.

106. CAL. CODE REGS. tit. 14, § 15105(a) (2013) (the draft must be circulated for at least thirty days, but for no longer than sixty days).

107. CAL. PUB. RES. CODE § 21091(d) (West 2012 & Supp. 2013).

108. *Id.* § 21092.1.

109. CAL. STATE AUDITOR, REPORT 2007-119, SOLAR ENERGY: AS THE COST OF THIS RESOURCE BECOMES MORE COMPETITIVE WITH OTHER RENEWABLE RESOURCES, APPLICATIONS TO CONSTRUCT NEW SOLAR POWER PLANTS SHOULD INCREASE 29 (2008) ("The NEPA mandate requires agencies drafting environmental documents to provide a detailed statement regarding adverse impacts of the project that cannot be avoided as well as a discussion of measures to mitigate adverse environmental impacts. However, the NEPA does not require a complete plan for mitigating those adverse impacts, nor does it require that those mitigation measures be implemented."); Watts, *supra* note 73, at 230–31.

110. CAL. PUB. RES. CODE § 21002.1 (West 2007).

111. *Id.* § 21081.

112. Watts, *supra* note 73, at 230–31.

113. CAL. STATE AUDITOR, *supra* note 109, at 29.

IV. THE COSTS OF CEQA AND DECENTRALIZED SITING ON WIND ENERGY GROWTH

CEQA not only increases the cost of developing a wind project, but also the risk developers face in pursing the project. Certainty and predictability are essential to attracting capital and developers.[114] CEQA undermines these values because compliance often involves large, variable fees and introduces highly unpredictable and potentially long delays into the permitting process. Decentralized permitting, without procedural regularity or specialized staff, exacerbates these regulatory unknowns. Many project developers report uncertainty about what is needed to obtain permits due to the administration of complex environmental review.[115] This uncertainty increases the risk in the development process[116] and has caused some major developers to express hesitation about pursing new wind projects in California.[117]

A. Monetary Costs

Permitting and regulatory compliance significantly affect the cost of wind projects. The United States Department of Energy's *2011 Wind Technologies Market Report* found that wind projects developed in California and New England from 2009 through 2011 were significantly more expensive than comparative projects in other regions.[118] Specifically, the national average of capacity-weighted costs equaled $2160 per kilowatt ("kW"),[119] but costs in California in New England neared $2500 per kW, fifteen percent greater than average.[120] The *Market Report* attributed the higher project costs in California and New England to their more stringent permitting and regulatory regimes.[121] By comparison, Texas, the region reputed to have lowest regulatory barriers

114. CHI-JEN YANG, ELECTRICAL TRANSMISSION: BARRIERS AND POLICY SOLUTIONS 10 (2009), *available at* http://www.nicholas.duke.edu/ccpp/ccpp_pdfs/transmission.pdf ("[C]ertainty and predictability are the secrets to capital formation.").

115. CAL. ENERGY COMM'N, *supra* note 8, at 187.

116. *Id.*

117. Kate Galbraith, *California's Wind Slowdown*, N.Y. TIMES (Jan. 29, 2009, 7:03 AM), http://green.blogs.nytimes.com/2009/01/29/californias-wind-slowdown/.

118. U.S. DEP'T OF ENERGY, *supra* note 6, at 36–37. Note that the costs of the wind projects in the study were weighted for capacity.

119. *Id.* The national average for project costs includes the high costs in California and New York; exclusion of these regions from the national average would result in a more pertinent and stark depiction of the divergent costs.

120. *Id.*

121. *Id.*

for developing wind resources,[122] had the lowest levelized project costs at only $2000 per kW.[123] The strong correlation between the stringency of siting regulations and cost across regions suggests that these barriers significantly contribute to the variation in costs.[124]

Due to the timing of the expense, CEQA compliance costs may significantly deter potential developers. This expense can constitute a substantial proportion of the total development budget, and is considered one of the major drivers of development costs.[125] Moreover, the capital outlay for environmental evaluations is incurred before the project has attracted outside investors[126] and consequently must be borne solely by the developer.[127]

Furthermore, investment at this moment in the project timeline is particularly risky. To that end, approximately sixty percent of renewable projects solicited to California investor-owned utilities were never constructed.[128] While the failure of many aborted projects cannot be directly attributed to CEQA, the failure rate provides some indication of the risk facing developers. If the project fails to receive a permit, many of resources expended by the developer up to that point are unrecoverable: the costs associated with drafting the EIR; and most likely the costs accrued in gathering anemometric data, negotiating leases for the tracts of land, developing the layout of the project, and securing contracts to sell the electricity.[129] Ex ante, developers weigh these early expenses against the probability of success in deciding whether to enter the market.[130] Developers will demand higher rate of return to offset the risk they take by making a large investment during the project's infancy.[131]

122. Texas has permissive siting standards: developers do not have to address wildlife impacts, obtain environmental certification, or conduct any local permitting review. *See* Engelman, *supra* note 70, at 10,563; *see also* SUSAN COMBS, TEX. COMPTROLLER OF PUB. ACCOUNTS, THE ENERGY REPORT 174 (2008), *available at* http:// www.window.state.tx.us/ specialrpt/energy/pdf/11-WindEnergy.pdf.

123. U.S. DEP'T OF ENERGY, *supra* note 6, at 36–37.

124. *Id.*

125. CAL. ENERGY COMM'N, *supra* note 8, at 189 (noting that the primary development costs for commercial wind facilities are permitting costs, along with reliability, connection, and turbine costs).

126. *See supra* Part I.

127. The costs of preparing the initial study and an EIR can be shifted to the developer of the project. CAL. PUB. RES. CODE § 21089(a) (West 2007); CAL. CODE REGS. tit. 14, § 15045(a) (2013).

128. Robert D. Castro, *Special Report: Developing Wind Projects in California—or Anywhere*, POWER MAG., Dec. 2007, at 60, 60.

129. *See* NWCC SITING SUBCOMM., *supra* note 17, at 10–12; Bohn, *supra* note 25, at 92–94.

130. RICHARD A. BREALEY ET AL., PRINCIPLES OF CORPORATE FINANCE 224–25 (10th ed., 2011).

131. *Id.* at 24 (discussing the trade-off between risk and return generally).

B. Increased Risk of Mitigation Measures

As a result of CEQA, developers may be forced to include mitigation measures in any proposal for new wind facilities. CEQA requires evaluation of potential adverse environmental effects[132] and prohibits approval of a project with significant effects, absent overriding considerations.[133] In a survey of eight recent CEQA reviews of proposed wind facilities in Kern and Solano counties, all projects were found to have significant environment effects, but all were issued a statement of overriding consideration and approved.[134] Six approvals were conditioned on the implementation mitigation measures.[135]

Mitigation measures, tailored from the environmental assessments, aim to minimize adverse effects by imposing conditions on location, size, operation, construction, and maintenance of turbines.[136] In California, mitigation measures have dramatically altered development plans in response to the predicted impact on wildlife, cutting deeply into the project's profitability. For example, Alameda County attempted to reduce bird mortality at Altamont Pass by "removing some existing turbines, turning off selected turbines at certain times, implementing other habitat modification and compensation measures, and gradually replacing existing turbines with newer turbines."[137] For similar reasons, a wind project in Contra Costa County had to reduce the number of turbines, redesign the turbines, and bury the electrical lines.[138]

These mitigation measures highlight the paradoxical tradeoff between CEQA environmental review and controlling greenhouse gas emissions. Wind energy projects may be forced to pay for expensive mitigation measures, despite providing a net beneficial impact on the environment. Moreover, the lead agency has some discretion in imposing mitigation measures when there are overriding economic, legal, social, or

132. CAL. PUB. RES. CODE § 21080(c) (West 2007).

133. *Id.* § 21081.

134. *See infra* Part IV.C (discussing survey for recent wind projects in select counties); *see also supra* text and accompanying footnotes 109–13 (discussing statements of overriding considerations).

135. *See id*.

136. U.S. FISH AND WILDLIFE SERV., WIND TURBINE GUIDELINES ADVISORY COMMITTEE REPORT 13 (2010), *available at* http://www.fws.gov/habitatconservation/windpower/Wind_Turbine_Guidelines_Advisory_Committee_Recommendations_Secretary.pdf; Sean F. Nolan, *Negotiating the Wind: A Framework to Engage Citizens in Siting Wind Turbines*, 12 CARDOZO J. CONFLICT RESOL. 327, 338–39 (2011).

137. Nolan, *supra* note 136, at 340.

138. *Id.*

technological considerations. However, CEQA does not explicitly provide for overriding environmental considerations.[139]

C. Time Delays

Permitting wind projects in California takes longer than in other states,[140] and CEQA compliance constitutes a significant delay.[141] Applicants fear getting trapped in "seemingly unending multiyear reviews."[142] To combat this concern, CEQA requires the lead agency to certify the completed EIR within one year of accepting the project application.[143] Unfortunately, this deadline is rarely met: the survey conducted for this Note of recent wind projects in select counties indicates that the average time to complete an EIR was 447.6 days.[144]

The permitting process compounds these delays. Under the Permit Streamlining Act ("PSA"), the statutory time constraints on permitting do not begin until the CEQA process is complete.[145] Thus, the lead agency has 180 days to file a notice of determination after it certifies the EIR as complete.[146] The survey further indicates that lead agency

139. CAL. PUB. RES. CODE § 21081 (West 2007) (defining statements of overriding consideration as "specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers" that "outweigh the significant effect on the environment" but does not explicitly consider that one environmental effect can outweigh another).

140. Castro, *supra* note 128, at 62 ("In California, the overall permitting process for a wind farm is usually much longer and more costly than in neighboring states due to stricter environmental regulations and much higher levels of public participation. Naturally, those factors also are reflected in environmental permitting. Wind plants built in the Golden State are subject to the California Environmental Quality Act (CEQA), which may require additional studies, public hearings, and documentation.").

141. *Id*.

142. Watts, *supra* note 73, at 238–39.

143. CAL. PUB. RES. CODE § 21100.2(a)(1)(A) (West 2007); CAL. CODE REGS. tit. 14, § 15108 (2013).

144. Brian Troxler, Time Delay After Filing Notice of Preparation for Wind Projects in Kern and Solano Counties (Nov. 2011) (unpublished survey) (on file with author). It is based on the time between filing the Notice of Preparation and the final EIR at the State Clearing House. *See id.* Given the potential for statewide and regional environmental effects of large wind power plants and likelihood of state agency involvement, large wind power plants must submit CEQA documents to the State Clearinghouse. CAL. PUB. RES. CODE § 21082.1(c)(4) (West 2007). The survey focused on the wind projects in the Kern and Solano counties that had filed a final EIR at the State Clearinghouse between January 1, 2008 and October 2, 2011 (the day the statistical analysis was completed). *See* Troxler, *supra* note 144. These counties were selected because they have a substantial amount of wind potential and wind-powered generators. *Id.* The survey of final EIRs yielded a fairly small sample size of eight. *Id.* The average time between filing a notice of preparation and the final EIR was 447.6 days with a standard deviation of 432.8 days. *Id.* The length of time ranged from 224 days to 1508 days. *Id.*

145. CAL. GOV'T CODE § 65950(a)(1) (West 2009).

146. *Id.*

determinations routinely exceed this allotted time, on average, by 189.2 days.[147] In sum, the lead agency took an average of 873.5 days to reach a decision in compliance with CEQA.[148]

Finally, the permitting process reaches its third separate statutory timeline. Responsible agencies—other local, state, and federal agencies from whom permits or permission are required—have another 180 days to make a determination after the lead agencies has approved the project.[149] Thus, even if each step in permitting were miraculously completed within the statutory timeframes, the process would still last two years.[150] In reality, the decentralized and unspecialized committees reviewing the applications are unable to comply with the statutory time limits. On average, the permitting process extends for four years[151]—significantly longer than the typical one year permitting process in other areas of the country.[152]

These delays are particularly long in comparison to the time it takes to construct an approved project. For example, the High Wind Energy Project, a 145.8 MW facility comprised of twenty-three miles of roads and eighty-one turbines, was completed in ten months after permitting.[153] This timeline is not unusual; most projects of utility size can be constructed in just over a year[154] and sometimes much more quickly. Indeed, an eighty MW wind project was constructed in only three months.[155]

Lengthy delays affect the "bottom line" for developers. "When delays occur developers may be required to resize or refinance a project, [which] can lead to project termination, project sale, or a contract

147. The sample size was six. *See* Troxler, *supra* note 144. The average time was 369.2 days with a standard deviation of 434.8 days. *Id.* The length of time ranged from 269 days to 1880 days with a standard deviation of 641.43 days. *Id.*

148. The sample size was seven. *Id.* The length of time ranged from 224 days to 1880 days, with a standard deviation of 635.13 days. *Id.*

149. CAL. GOV'T CODE § 65952(a) (West 2009) ("Any public agency which is a responsible agency for a development project that has been approved by the lead agency shall approve or disapprove the development project within whichever of the following periods of time is longer: (1) Within 180 days from the date on which the lead agency has approved the project . . . .").

150. CAL. STATE AUDITOR, CALIFORNIA ENERGY COMMISSION: ALTHOUGH EXTERNAL FACTORS HAVE CAUSED DELAYS IN ITS APPROVAL OF SITES, ITS APPLICATION PROCESS IS REASONABLE 33 (2001), *available at* www.bsa.ca.gov/pdfs/reports/2001-118.pdf.

151. CTRS. OF EXCELLENCE, *supra* note 63, at 11.

152. NWCC SITING SUBCOMM., *supra* note 17, at 10.

153. *Id.*

154. *Frequently Asked Questions,* WIND ENERGY AM., http://www.windenergyamerica.com/faqs.html (last visited Oct. 31, 2012).

155. *Id.* The 80MW Llano Estacado Wind Ranch at White Deer was constructed in three months. *Id*.

failure."[156] Developers may also have to continue to carry the costs of outstanding leases, property taxes, and interest.[157] Furthermore, the present value—rather than the nominal value—of future "cash flows" determines the attractiveness of the project.[158] Because money today is worth more than money tomorrow, to accurately value a project future payments must be discounted back to their present value.[159] As a corollary, a delay in payment reduces its value,[160] and thus permitting delay reduces the present value of a proposed development.

However, clever deal structuring can prevent many of these costs. By bargaining for lease options, rather than leasing the land directly, developers can significantly reduce their exposure. Likewise, developers wait to seek financing until later in the process.[161] But as the deals become more complicated, especially with unsophisticated counterparties such as the fee holders, the transaction costs may constrain these options.[162]

Most significantly, the length of the delay during permitting and the accompanying CEQA review is highly uncertain. As illustrated in the small sample of wind projects analyzed for this Note, the actual delay during CEQA varies dramatically.[163] Developers do not know how long review will take or whether litigation will result.[164] This uncertainty constitutes the primary burden on all subject development.[165] Decentralization further undermines the predictability of permitting process.[166]

D. The Impact of Delays

The chance that political or economic realities will change and adversely affect the profitability of a project increases as the project

156. CAL. ENERGY COMM'N, *supra* note 8, at 187.

157. *See* Arthur F. Coon & Carolyn Nelson Rowan, *When Environmental Review under the California Environmental Quality Act Groundhog Day becomes "Groundhog Day": What's a Frustrated Developer to Do?*, 20 MILLER & STARR REAL ESTATE NEWSALERT 431, 431 (2010).

158. ROBERT HIGGINS, ANALYSIS FOR FINANCIAL MANAGEMENT 252 (9th ed. 2008).

159. *Id*. at 253.

160. *Id*. at 255.

161. *See supra* Part I.

162. *See* Eric A. Posner, *The Parol Evidence Rule, the Plain Meaning Rule, and the Principles of Contractual Interpretation*, 146 U. PA. L. REV. 533, 553 (1998) (explaining that transaction costs are likely to be high when parties are unsophisticated or the transaction complex); Steven L. Schwarcz, *Fiduciaries with Conflicting Obligations*, 94 MINN. L. REV. 1867, 1874 (2010) (noting that transactions with unsophisticated parties involve high transaction costs).

163. *See supra* notes 144–48.

164. *See* Watts, *supra* note 73, at 216–17.

165. *See id.* at 217.

166. Rosenberg, *supra* note 15, at 677.

timeline extends.[167] Two of the major factors that affect the profitability of wind energy—the price of fuel for traditional power plants and the availability and desirability of government support[168]—can fluctuate widely during the lengthy California permitting process. Historically, wind energy growth has depended on high fuel commodities prices.[169] Fossil fuel prices and wind energy growth are related: when fossil fuel prices are high, wind developers can more cheaply secure capital,[170] and thus stand to gain higher profits. Conversely, when fossil fuel prices abruptly fall, as they did in the late 1980s,[171] investments in the wind industry freeze.[172]

California's permitting process prolongs the period between investment and participation in the energy market, which lessens the appeal of current market advantages. Fossil fuel prices may fall before a wind facilities project is completed. Exacerbating this concern is the fact that prices for fossil fuel have fluctuated widely and unpredictably over the last forty years.[173] Moreover, wind developers often lock projects into long-term power purchase agreements to ensure a buyer at a known price.[174] Without an "off-take" agreement selling the power, the project is unlikely to be able to secure outside financing.[175] Thus, if a wind developer cannot seize on favorable market conditions due to permitting delays, the project's power production may be committed under an unfavorable agreement for years. Although fossil fuel price volatility hampers development of wind resources worldwide, this uncertainty may disproportionately affect development in regions such as California, which are unable to quickly respond to favorable market conditions.

167. *See* Jeffry S. Hinman, *The Green Economic Recovery: Wind Energy Tax Policy After Financial Crisis and American Recovery and Reinvestment Tax Act of 2009,* 24 ENVTL. L. & LITIG. 35, 46–47 (2009).

168. *Id.*

169. *Id.* at 53.

170. *Id.* at 47.

171. ROBERT W. RIGHTER, WIND ENERGY IN AMERICA: A HISTORY 221–22 (1st ed. 1996).

172. Hinman, *supra* note 167, at 53. The effect was pronounced enough in the late 1980s that Julian Ajello, a California utilities commissioner, proclaimed: "I don't see much future for wind if the cost of fossil fuels doesn't go up." Righter, *supra* note 171, at 221.

173. ENERGY INFO. ADMIN., DOE/EIA-0384(2007), ANNUAL ENERGY REVIEW 2007, at 164–65, 194–97, 216–17 (2008), *available at* http://www.eia.gov/totalenergy/data/annual/archive/038407.pdf; Hinman, *supra* note 167, at 47.

174. *See* U.S. DEP'T OF ENERGY, *supra* note 6, at vi (noting that while power purchase agreements continue to be the most common "off-take" arrangement, these agreements are becoming scarcer).

175. Bohn, *supra* note 25, at 93.

Government support has been another driver of growth in the wind energy industry.[176] Federal support for commercial wind energy has, however, been inconsistent throughout the last three decades.[177] Predictably, growth in wind energy capacity has fluctuated in response.[178] The fate of the wind industry remains tied to government support, and without the current tax credit in place, the wind industry would "'fall off a cliff.'"[179]

Since 1992, the Production Tax Credit ("PTC")[180] has been a major source of government support for wind development.[181] The PTC offers wind farm operators a tax credit of 2.2¢ per kilowatt-hour[182] for electricity produced and sold by wind facilities,[183] underwriting twenty or thirty percent of the projects' installed costs.[184] However, Congress did not intend for the PTC to be an entrenched subsidy.[185] Rather, Congress originally limited the availability of the credit to facilities placed in service before December 31, 1999 in order to grant the wind industry a six-year window for development.[186] Although the PTC is still offered, its existence has been and continues to be uncertain. [187] The PTC expired

176. *See* Hinman, *supra* note 167, at 46–47.

177. Federal support for renewables originally arose in the wake of the 1970s energy crises, as the OPEC embargo and the Iranian Revolution demonstrated America's dependence on foreign energy sources. *Id.* at 47–48. In 1978, the Federal government encouraged renewable energy by opening energy markets dominated by utilities by enacting the Public Utility Regulatory Policies Act of 1978 and expanding tax deductions for investments in renewable energy. *Id.* In California, federal and state tax deductions totaled nearly half of the investment costs, spurring a boom in wind development. PAUL GIPE, WIND ENERGY COMES OF AGE 30–31 (1995). After tax incentives expired and fossil fuel prices fell, wind energy investment quickly dried up. *See* Hinman, *supra* note 167, at 53.

178. *See* Hinman, *supra* note 167, at 61 (comparing the rapid growth in capacity while the federal government's PTC was in place against the sharp decline in the years following its periodic expiration).

179. Diane Cardwell, *An Industry Becalmed*, N.Y. TIMES, Sept. 21, 2012, at B1 (quoting Ryan Wiser, Lawrence Berkeley Nat'l Lab.).

180. I.R.C. § 45 (2006), *amended by* American Taxpayer Relief Act of 2012, Pub. L. No. 112-240, 126 Stat. 2313.

181. Hinman, *supra* note 167, at 55.

182. This is the current inflation adjusted credit. *Federal Policy*, AM. WIND ENERGY ASS'N, http://www.awea.org/issues/federal_policy/index.cfm (last visited Oct. 18, 2011).

183. I.R.C. § 45(a).

184. Castro, *supra* note 128, at 63.

185. Hinman, *supra* note 167, at 62–63. Wind capacity growth during the 1990s was relatively slow. *Id.* However, the stagnant growth may be attributed to low prices for traditional energy sources and a time lag as the industry determined the value of the PTC. *Id.* Moreover, technical improvements in the wind turbines increased the capacity of the machines, from 0.5 MW in 1996 to 1.6 MW in 2006. *Id.* These improvements made wind energy more competitive with traditional power plants and thus encouraged investment. *Id.*

186. *Id*.

187. Cardwell, *supra* note 179, at B1.

in 2000, and remained unavailable for most of the year before Congress reinstated it.[188] The reinstated PTC was subject to a sunset provision with substantially curtailed duration.[189] The credit expired twice more in the early part of the past decade[190] and once again at the end of 2012, although the PTC was extended for a year days later in the "fiscal cliff" deal.[191] Its continued availability remains politically controversial and consequently uncertain.

Originally under the PTC, any facility completed and placed in service prior to the PTC's expiration is eligible for the tax credit for the first ten years of operation.[192] If the facility was not placed in service by the expiration of the PTC, and the credit is not later extended, then such a facility was not eligible to receive the tax benefit.[193] As the expiration date approached, developers had to assess the probability that the project would not be completed in time to be eligible for the credit.[194] However, due to recent changes to the PTC, a project is eligible so long as construction begins before the credits expiration.[195] Now, developers may be willing to initiate projects whose economic viability depends on the tax credit when they are relatively certain that construction will be underway before expiration. This sensible modification to the PTC will ease uncertainty about the profitability of prospective wind projects around the country. However, California is unlikely to benefit as greatly as states with less time consuming permitting processes. Prospective projects in California must still consider the permitting delay, whereas projects in some states can begin construction much more quickly.

To this end, unsurprisingly, the availability of the PTC affects the growth of the wind energy.[196] During the first half of the decade, expiration of the PTC did indeed disrupt national wind energy capacity growth.[197] Specifically, new capacity additions sharply declined in the year after an expiration: in 2000, a ninety-three percent drop from 1999;

188. U.S. DEP'T OF ENERGY, *supra* note 16, at 6.

189. I.R.C. § 45, *amended by* American Taxpayer Relief Act of 2012, Pub. L. No. 112-240, 126 Stat. 2313 (2013) (codified as amended in scattered sections of 26 U.S.C.); U.S. DEP'T OF ENERGY, *supra* note 16, at 7.

190. I.R.C. § 45(d); U.S. DEP'T OF ENERGY, *supra* note 16, at 7.

191. American Taxpayer Relief Act of 2012, 126 Stat. 2313; Dave Levitan, *Wind Power Tax Credit Survives Fiscal Cliff Deal*, FORBES, Jan. 2, 2013, http://www.forbes.com/sites/dave levitan/2013/01/02/wind-power-tax-credit-survives-fiscal-cliff-deal/.

192. Hinman, *supra* note 167, at 57–58.

193. *Id.*

194. *See* Hinman, *supra* note 167, at 62.

195. I.R.C. § 45(d).

196. Hinman, *supra* note 167, at 60.

197. *Id.*

in 2002, a seventy-three percent drop from 2001; and in 2004, a seventy-seven percent drop from 2003.[198] From 1999 to 2004, less than 6,000 MW of new capacity were installed in the United States,[199] less than half of the capacity that could have been installed during this period.[200] By comparison, during the following five years over 28,000 MW were constructed.[201]

The transient and variable nature of federal support disadvantages potential wind energy projects in California even more dramatically. The short but continuous extensions of the PTC in the last half of the decade resulted in dramatic capacity additions in many areas of the country.[202] Between 2004 and 2008, when the PTC was more stable, record amounts of new capacity were installed each year.[203] However, developers in California could not effectively respond to these incentives. Even if a developer initiated the permitting process the day after a two-year extension, whether the facility would even be permitted within the extension is highly uncertain.

In the most dramatic example of California's different interaction with the PTC, the lapse in 2002 did not stifle installation in California.[204] Rather, California wind installation surged ahead, with an addition of 140 MW, representing a 209% increase from the prior year.[205] Developers had sunk capital into projects that were unable to be completed within the narrow timeframe of the PTC extension, and were forced to run the risk that the Congress would not extend the tax credits. Despite this short-term capacity increase, the California wind industry's inability to respond to federal incentives ultimately translated into less capacity development. While the rest of the country experienced unprecedented wind energy growth after 2004, California wind industry

198. *Id.* at 61; *see also* WIND ENERGY ASS'N, FEDERAL PRODUCTION TAX CREDIT FOR WIND ENERGY 1 (n.d.), *available at* http://www.awea.org/issues/federal_policy/upload/PTC-Fact-Sheet.pdf.

199. *See* Nat'l Wind Energy Lab., *supra* note 1.

200. WIND ENERGY ASS'N, ANOTHER RECORD YEAR FOR NEW WIND INSTALLATIONS 1 (2008), *available at* http://www.casperlogisticshub.com/downloads/Windpower%20Projects%20per%20State.pdf.

201. *See Installed Wind Capacity*, U.S. DEP'T OF ENERGY, http://www.windpoweringamerica.gov/wind_installed_capacity.asp (last updated Nov. 8, 2012) (landing page containing maps that detail annual increase in wind capacity by state).

202. Hinman, *supra* note 167, at 61–62 (noting, however, that other economic forces also contributed to capacity growth between 2004 and 2008 as energy prices rose from late 2001 to a record peak in the third quarter of 2008).

203. Hinman, *supra* note 167, at 62.

204. *Installed Wind Capacity*, *supra* note 201.

205. *Id.*

responded tepidly until the end of the decade.[206] Given this history, it is evident that developers assess the risk that Congress will decline to extend the PTC whey they analyze the profitability of potential California wind projects. Thus, the short-term availability of tax credits significantly exposes California wind projects to political risks, compounding the uncertainty created by the combination of CEQA review and decentralized siting.

V. RECOMMENDATIONS

Greater involvement by California's state government would alleviate the uncertainty surrounding permitting, which would in turn alleviate investment barriers without sacrificing environmental review. The prior discussion focused on the disadvantages of CEQA and localized permitting. In proposing recommendations however, it is important to acknowledge that poor siting can result in environmental disasters. For instance, the early trial in wind energy at Altamont Pass resulted in a high avian death toll because developers improperly placed the wind facility directly in the path of a migratory bird route and in raptor hunting grounds.[207] The turbines needlessly killed many birds, and consequently stigmatized commercial wind energy.[208] Thus, while the laissez-faire paradigm of siting commercial wind turbines has achieved impressive capacity gains in Texas,[209] such an approach may fail to heed the mistakes of Altamont Pass. Environmental review is important in minimizing the chance of significant environmental impacts. Recognizing the potential for avoidable environmental harm, this Note advocates that California exercise its authority to site commercial wind energy projects and embrace a consolidated permitting and environmental review process, which nonetheless does not sacrifice the stringency of review.

206. Wind energy deployment in Texas offers a poignant comparison: in the years in which the PTC expired, wind energy installation completely halted. However, in the years immediately following the extensions, Texas experienced a boom in wind capacity, indicating that in the absence of constraining regulations developers can be highly responsive to incentives only available for a short time. From 2004 until 2009, wind energy capacity growth only averaged 102 MW per year in California, whereas in Texas, growth averaged 1455 MW per year during the same time period. *See Installed Wind Capacity*, *supra* note 201.

207. Will Wade, *The Unexpected Downside of Wind Power*, WIRED, Oct. 14, 2005, http://wired.com/science/planetearth/news/2005/10/69177?currentPage=all.

208. K. Shawn Smallwood & Carl Thelander, *Bird Mortality in the Altamont Pass Wind Resource Area, California*, 72 J. WILDLIFE MGMT., Jan. 2008, at 215, 215.

209. Engelman, *supra* note 70, at 10,563 (attributing the significant investment in wind energy in Texas to its permissive siting standards).

A. State Agency Siting Procedure

A state-level agency should permit and site wind energy projects through a process that synergistically and seamlessly incorporates a CEQA-equivalent review of projects. This process could eliminate "the vagaries of local land use practices" while considering and respecting environmental concerns.[210] A state agency would have greater institutional competency to evaluate applications, as personnel would be more likely to have the education and training to assess environmental impacts as well as socioeconomic and cultural resource impacts.[211] A state agency would also likely be more objective in its review and base its decision on the administrative record.[212] Additionally, the state agency would evaluate more applications than any single locality would, thereby enabling developers to assess their prospects on a more robust docket of decisions. Even in the short term the process would be more predictable, as greater resources at the state level could assure completed evaluation within reasonable time frames. Moreover, vesting permitting authority at the state level mitigates the risk that decisions will over-emphasize provincial concerns.[213]

Since the 1970s, state governments have increasingly assumed the authority to site power plants, preempting local attempts to block new generation.[214] Recognizing that wind energy faced similar opposition, many states have elevated wind turbine siting from local to state jurisdiction. Connecticut, Minnesota, Nevada, New Hampshire, Ohio, Oregon, Rhode Island, South Dakota, Vermont, and Washington vest siting and permitting in specialized state agencies.[215] However, the

210. Rosenberg, *supra* note 15, at 677; CAL. ENERGY COMM'N, *supra* note 8, at 187 (criticizing the local permitting regime because many county governments lack expertise or the resources they need to be effective).

211. *Id.*

212. *Id.*

213. *Id.* at 679 n.219 ("A too favorable locality could approve a large wind farm siting request that would fill local government tax coffers and increase farm rental income while at the same time damage significant state scenic or natural resource interests. On the other hand, a too unfavorable locality could reject similar proposals for vague, uncomfortable reasons while not considering statewide interests such as RPSs or other policies.").

214. Uma Outka, *The Renewable Energy Footprint*, 30 STAN. ENVTL. L.J. 241, 256–59 (2011). Arkansas, California, Connecticut, Florida, Iowa, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Montana, Nevada, New Jersey, New York, Ohio, Oregon, Rhode Island, Vermont, Washington, and Wisconsin currently site large power plants. *Id.* at 258.

215. CONN. GEN. STAT. ANN. §§ 16-50g–16-50Hh (West 2007) (providing that the Connecticut Siting Council regulates siting for facilities one MW or more fueled by renewable energy, although local zoning considerations may affect decisions); MINN. STAT. ANN. §§ 216F.01.2, 216F.07 (West 2010) (preempting local regulations and zoning ordinances for wind projects over a certain size with a permit system administered by the Minnesota Public Utilities Commission); NEV. REV. STAT.

degree of inclusiveness and centralization varies across state siting regimes. At one end of the spectrum, the Minnesota Public Utilities Commission administers a mandatory permitting regime, preempting local regulations.[216] The permitting scheme is designed to consider wind energy development in a "comprehensive manner, with the balancing of statewide interests by a staff of trained 'experts' instead of a local municipal board."[217] At the other end of the spectrum, Oregon sites wind projects larger than thirty-five MW through a state agency that applies local and state regulations,[218] providing procedural but not substantive uniformity.[219] Although Oregon siting requirements vary throughout the state, applicants may have the expert Energy Facility Siting Council review compliance with these requirements.[220] Even Oregon's centralized permit review process has been shown to be statistically significant in attracting wind energy development.[221] Both models, Minnesota's and Oregon's, streamline the permitting process by employing specialized committees and avoiding duplicative local review.

ANN. §§ 704.820–.900 (LexisNexis 2009) (requiring the Nevada Public Utilities Commission to site wind facilities greater than seventy MW); N.H. REV. STAT. ANN. §§ 162-H:2–H:4 (2002 & Supp. 2012) (providing that the New Hampshire Energy Site Evaluation Committee regulates the siting of wind facilities over thirty MW, and smaller facilities may opt into state regulation to preempt local regulation); OHIO REV. CODE ANN. §§ 4906.01–.99 (West 2010 & Supp. 2012) (regulating the installation of facilities fifty MW or more); OR. REV. STAT. §§ 469.300, .320 (2011) (providing for statewide site certification of wind power facilities thirty-five MW or more, after which local governments must issue their permits, subject only to conditions contained in the site certificate. Wind facilities with less capacity can opt into the state certification); R.I. GEN. LAWS ANN. § 42-98-1–98-20 (2006 & Supp. 2012) (regulating state siting of wind projects of forty MW or more); S.D. CODIFIED LAWS § 49-41B-1–B-36 (Supp. 2012) (providing for statewide siting of wind projects with 100 MW capacity or more); VT. STAT. ANN. tit. 30, § 248 (2008 & Supp. 2012) (Vermont Public Service Board sites all wind energy facilities except those for on-site energy consumption); WASH. REV. CODE ANN. §§ 80.50.010–.904 (West 2001 & Supp. 2013) (requiring the Energy Facility Site Evaluation Council to site all facilities over 350 MW and allowing renewable facilities to opt into the state process rather than use the local permitting process).

216. MINN. STAT. ANN. §§ 216F1.2, 216F.07 (West 2010).

217. Engelman, *supra* note 70, at 10,562; *see also* MINN. STAT. ANN. § 216E.03 (West 2010) (requiring that determinations be guided by resource conservation, environmental impacts, land use conflicts, and energy security).

218. *See* OR. REV. STAT. ANN. §§ 469.300, 469.504 (2011). Wind energy facilities with less nameplate capacity can opt into the state permitting. *Id.* § 469.320.

219. *See* Hannah Wiseman, *Expanding Regional Renewable Governance*, 35 HARV. ENVTL. L. REV. 477, 525–26 (2011).

220. *See* OR. REV. STAT. ANN. § 469.504.

221. Bohn, *supra* note 25, at 94–95 (finding that Oregon's streamlined permitting process was statistically significant in attracting development when controlling for other determinative factors).

B. California Energy Commission Thermal Power Plant Siting

Preemption of local zoning in California is not without precedent. In 1974, the Warren-Alquist State Energy Resources Conservation and Development Act vested the exclusive authority[222] to site large thermal power plants[223] with the California Energy Commission ("CEC").[224] In its legislative findings, the Act justified the centralized permitting process on the grounds that "expanded authority and technical capability within state government" was necessary to prevent "delays and interruptions in the orderly provision of electrical energy, protection of environmental values, and conservation of energy resources."[225] Moreover, this certification process addressed many of the problems then frustrating developers of traditional power plants and currently plaguing wind developers: the process was designed to be consistent and eliminate regulatory duplication and uncertainty.[226]

In effectuating these policy goals, the CEC permitting process implemented several steps of review. First, after receiving an application request, the CEC staff determines the sufficiency of the application.[227] The subsequent review of accepted applications proceeds in three stages: discovery, analysis, and hearings. [228] During discovery, the CEC staff gathers information and holds public information hearings, and

222. CAL. PUB. RES. CODE § 25500 (West 2007) ("[T]he commission shall have the exclusive power to certify all sites and related facilities in the state, whether a new site and related facility or a change or addition to an existing facility. The issuance of a certificate by the commission shall be in lieu of any permit, certificate, or similar document required by any state, local or regional agency, or federal agency to the extent permitted by federal law . . . ."). However, "[i]f the commission finds that there is noncompliance with a state, local, or regional ordinance or regulation in the application, it shall consult and meet with the state, local, or regional governmental agency concerned to attempt to correct or eliminate the noncompliance. If the noncompliance cannot be corrected or eliminated, the commission shall inform the state, local, or regional governmental agency if it makes the findings required by Section 25525." *Id*. § 25523. Specifically, the commission must "determine[] that the facility is required for public convenience and necessity and that there are not more prudent and feasible means of achieving public convenience and necessity" to certify a site in noncompliance with other standards. *Id.* § 25525.

223. *Id.* § 25120 (West 2007) ("'Thermal powerplant' means any stationary or floating electrical generating facility using any source of thermal energy, with a generating capacity of 50 megawatts or more, and any facilities appurtenant thereto."); *id.* § 25110.

224. *See id.* §§ 25500–43. Although commonly known as the California Energy Commission, its official title is the State Energy Resources Conservation and Development Commission. *Id.* § 25104.

225. *Id.* § 25005.

226. *Power Plant Siting Proceedings FAQs,* CAL. ENERGY COMM'N, http://www.energy.ca.gov/public_adviser/power_plant_siting_faq.html, (last visited Oct. 18, 2012).

227. *Six Phases of the Power Plant Siting Process*, CAL. ENERGY COMM'N, http://www.energy.ca.gov/public_adviser/six_phases.html (last visited Oct. 18, 2012).

228. *Id.*

potentially problematic issues are identified during this time.[229] In the analysis stage, the staff composes a Staff Assessment based upon its analysis and the concerns of participants and other interested parties. In the hearings stage[230] the CEC Committee, composed of the two Commissioners assigned to the case, formally hears the findings of the applicant, staff, and other parties.[231] Based on these hearings and the Staff Assessment, the Committee issues the Presiding Member's Proposed Decision. [232] After public comment, the full Energy Commission decides whether to approve or deny the application at a regular, bi-monthly meeting.[233]

CEC licensing incorporates CEQA's objectives through a strikingly similar procedure. The CEC evaluates and responds to the proposed project's significant environmental impacts.[234] Like under CEQA, the CEC is constrained in its ability to approve projects in that it cannot site any facility with significant adverse environmental effects without imposing mitigation measures[235] or absent a overriding consideration.[236] The Resource Agency acknowledged the rigor and similarity of this process, certifying it as a CEQA equivalent, thereby exempting it from CEQA guidelines for scheduling, notice, and documentation.[237]

In contrast to the traditional permitting regime, commentators have praised the efforts of CEC for "striking an appropriate balance between minimizing the time for facility siting and permitting review, while also protecting the environment and respecting the rights of local towns, individuals and interest groups to participate in and contribute to the site evaluation process."[238] This siting process "is in design and practice an

229. *Id.*

230. *Id.*

231. *Id.* The public is also encouraged to comment. *Id.*

232. *Id.*

233. *Id.*

234. CAL. PUB. RES. CODE §§ 25519, 25541 (West 2007); CAL. CODE REGS. tit. 20, §§ 1742, 1752.5 (2013).

235. CAL. CODE Regs. tit. 20, § 1755(c).

236. *Id.* § 1755(d).

237. *Id.* tit. 14, § 15250 ("Section 21080.5 of the Public Resources Code provides that a regulatory program of a state agency shall be certified by the Secretary for Resources as being exempt from the requirements for preparing EIRs, negative declarations, and initial studies if the Secretary finds that the program meets the criteria contained in that code section. A certified program remains subject to other provisions in CEQA such as the policy of avoiding significant adverse effects on the environment where feasible."); *id.* § 15251 ("[The] power plant site certification program of the State Energy Resources Conservation and Development Commission under Chapter 6 of the Warren-Alquist Act, commenc[es] with Public Resources Code Section 25500 [as a certified program].").

238. HEWLETT FOUND., SITING POWER PLANTS: RECENT EXPERIENCE IN CALIFORNIA AND BEST PRACTICES IN OTHER STATES 4 (2002), *available at* http://www.ef.org/documents/

effective mechanism for the timely siting of major energy facilities in the State of California. The standard CEC siting process not only is relatively fair and efficient, but is also very effective at encouraging and responding to meaningful public input, and contains a comprehensive review of potential environmental impacts."[239]

Much of the process' predictability can be attributed to its emphasis on reasoned decision making by expert staff and commissioners[240] that have skills developed from extensive permitting experience.[241] In the past six years, CEC has processed applications for ninety-three projects, double the number of applications processed in the preceding twenty years.[242] Additionally, in contrast to the current decentralized wind siting regime, the CEC permitting expense is predetermined: developers pay a flat fee of $255,075, plus $510 per MW at the time of filing.[243] Projects granted a license must also pay a $25,508 compliance fee.[244] Developers proposing projects licensed through this process can accurately assess the probability of success and the costs of permitting.

Moreover, the CEC processes siting requests in a reasonable timeframe.[245] Statutory time constraints require that the CEC permit most projects within one year of receiving the application,[246]

Siting_Report.pdf.

239. *Id. at 2.*

240. *Siting, Transmission, and Environmental Protection Division,* CAL. ENERGY COMM'N, http://www.energy.ca.gov/siting/index.html#guides (last visited Oct. 3, 2012) (stating that the siting office maintains a staff of experts in over twenty different environmental and engineering disciplines, allowing it to perform balanced and independent evaluations).

241. *Energy Facilities Siting / Licensing Process*, CAL. ENERGY COMM'N, http://www.energy.ca.gov/sitingcases/#license (last visited Oct. 3, 2012) (noting the volume of siting requests handled by the commission).

242. *Id.* ("From 1978 to 1998 before California's electricity generation industry was restructured, the Energy Commission analyzed and approved 47 projects totaling 5,589 megawatts (MW). More recently, in the early 1990s the Energy Commission certified 14 power plants. Of the 14 plants, 10 were approved and eight were constructed totaling 995 MW. No power plant applications were filed with the Energy Commission between August 1994 and May 1997 because there was so much uncertainty during the pending restructuring of the electricity industry. Electricity deregulation began on March 31, 1998. From 1998 through February 2011, 90 electric generation projects, totaling 34,892.5 MW, have been reviewed and licensed by the Energy Commission. 48 of these licensed facilities have been built and are on-line producing 16,635 MW. Workload has been at historic levels these past several years with the peak number of applications for new projects twice that of the peak in the 1980s. Over the past several years, the Commission tracked upwards of 150 potential projects 50 MW and larger; however, most of these projects were not filed with the Energy Commission because of unfavorable market conditions.").

243. *Id.*

244. *Id.*

245. HEWLETT FOUND., *supra* note 238, at 11–12.

246. CAL. PUB. RES. CODE § 25522(a) (West 2007) ("[W]ithin 18 months of the filing of an application for certification, or *within 12 months if it is filed within one year of the commission's approval of the notice of intent*, or at any later time as is mutually agreed by the commission and the

significantly more expeditious than the two-year process under CEQA and PSA. The CEC has not disregarded this twelve-month mandate: the California Bureau of State Audits evaluated the effectiveness of the CEC siting process in the wake of the California energy crisis in 2000–2001. The Bureau's report considered the thirty-six applications submitted to the CEC in the 1990s. Twenty-three applications were approved,[247] with an average processing time of fourteen months.[248] Only ten of the approvals were issued thirty days beyond twelve months, and the delays in many of these cases were outside of the Energy Commission's control.[249] This audit report attributed the Energy Commission's ability to approve projects in a timely manner to the streamlined and combined permitting process. The Audit Bureau found that the CEC "combines . . . activities that are preformed consecutively under CEQA and PSA, and its process reduces the number of documents required . . . . [I]t is allowed to combine certain analyses that in the CEQA process must be presented separately."[250]

In recognition of its success, the authority to site commercial wind projects should be allocated to the CEC. By centralizing thermal power plant siting, California aimed to and has succeeded in licensing large thermal power plants in an "expeditious and environmentally considerate manner."[251] Moreover, there are overlaps and synergies between siting wind projects and thermal power plants. The CEC staff already has expertise in evaluating the environmental impacts of large energy projects, balancing state and local considerations, and coordinating with other stakeholders. By vesting this authority with the CEC, the State government could efficiently site commercial wind developments without expending the resources to form a new department.

applicant, the commission shall issue a written decision as to the application.") (emphasis added); CAL. STATE AUDITOR, *supra* note 150, at 7–8 ("[A]ny developer proposing a large and complex project . . . must complete a 12-month NOI process before filing an application. Essentially, the objective of the NOI process is to determine the need for, acceptability of, and suitability of a proposed site and to evaluate whether any alternatives to the proposal would better carry out the aims of the Warren-Alquist Act and the California Environmental Quality Act (CEQA). During the NOI process, the applicant must propose at least three alternative sites, and the energy commission must ultimately evaluate the suitability and approve at least one of these.").

247. CAL. STATE AUDITOR, *supra* note 150, at 1. Thirteen of the thirty-six applications were withdrawn by the project developers. *Id.*

248. *Id.*

249. *Id.* at 13. The analysis stage for only three of the projects took more than twelve months. *Id.* at 15. However, in each of the ten delinquent decisions, the applicant failed to submit the requested information in a timely manner. HEWLETT FOUND., *supra* note 238, at 11.

250. CAL. STATE AUDITOR, *supra* note 150, at 33–34.

251. *Power Plant Siting Proceedings FAQs*, *supra* note 226.

VI. CONCLUSION

California has long been recognized as a leader in addressing climate change,[252] but CEQA and decentralized siting has imposed investment barriers to attracting further wind energy development. California could alleviate these barriers, without necessarily detracting from environmental review, by centralizing permitting authority in the California Energy Commission and consolidating its licensing and environmental review process.

252. Peter Henderson, *A Threat to California's Climate Change Progress*, N.Y. TIMES, Sept. 19, 2010, http://www.nytimes.com/2010/09/20/business/energy-environment/20green.html; *see also* Barry G. Rabe et al., *State Competition as a Source Driving Climate Change Mitigation,* 14 N.Y.U. ENVTL. L.J. 1, 8–9 (2005) ("California has a reputation as the country's principal environmental mover.").